DOCKET FILE COPY ORIGINAL

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

RECEIVED

JUL 21 2000

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of	)	
	)	
Implementation of the Local Competition Provisions in the Telecommunications Act of 1996	)	CC Docket No. ~~96-68~~ 96-98
	)	
Inter-Carrier Compensation for ISP-Bound Traffic	)	CC Docket No. 99-68

COMMENTS OF
WESTERN TELEPHONE INTEGRATED COMMUNICATIONS, INC.

John Cleven Tooker, President
Western Telephone Integrated
Communications, Inc., *pro se*
303 East Jackson Street
Medford, OR 97501

July 21, 2000

No. of Copies rec'd 0+4
List A B C D E

TABLE OF CONTENTS

Page

SUMMARY 1

DISCUSSION

A. Applicable Law Compels a Finding That Dial-up Calls to a Local ISP Are Local Calls Subject to Reciprocal Compensation 3

B. A Large Fraction of Successful Internet Communications Never Go Beyond the Local ISP 9

CONCLUSION 15

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of	)	
	)	
Implementation of the Local Competition Provisions in the Telecommunications Act of 1996	)))	CC Docket No. 96-68
	)	
Inter-Carrier Compensation for ISP-Bound Traffic	))	CC Docket No. 99-68

COMMENTS OF WESTERN TELEPHONE INTEGRATED COMMUNICATIONS, INC.

Western Telephone Integrated Communications, Inc. (Western Telephone), on its own behalf, files these Comments in the above-captioned proceeding.[1]

SUMMARY

Current federal law all but mandates the conclusion that calls to a local ISP are local for purposes of reciprocal compensation. Legal questions aside, however, the vast majority of such calls in fact never reach the Internet, because the ISP responds with a local copy of the requested website, email, or UseNet news article. Thus, nearly all ISP calls are local by any test.

Legal summary. The Telecommunications Act of 1996 requires local exchange carriers to establish reciprocal compensation arrangements.[2] The Commission construed this requirement

---

[1] "Comment Sought on Remand of the Commission's Reciprocal Compensation Declaratory Ruling by the U.S. Court of Appeals for the D.C. Circuit," Public Notice, FCC 00-227 (released June 23, 2000). Western Telephone has pending state applications for authority to operate as a competitive local exchange carrier (CLEC). In the event of favorable action on its applications, Western Telephone's collection and payment of reciprocal compensation will turn in part on the outcome of this proceeding.

[2] 47 U.S.C. Sec. 251(b)(5).

as applying only to local traffic.[3] But the Commission subsequently removed ISP-bound traffic from the local category, and thus exempted it from reciprocal compensation. The Commission held that ISP traffic does not terminate at the ISP's local server, but continues on to the targeted website, often in another state.[4] That "end-to-end" analysis persuaded the Commission that ISP-bound traffic is jurisdictionally mixed but predominantly interstate, and hence ineligible for reciprocal compensation.[5]

The U.S. Court of Appeals for the D.C. Circuit questioned the Commission's end-to-end analysis, and remanded the matter for another look.[6] Although the court did not itself determine that calls to an ISP are local, it left the Commission little room to find otherwise. The court deemed irrelevant the precedents on which the Commission had rested its analysis.[7] Moreover, the court pointed to a statutory framework that admits only two kinds of local exchange service: exchange access, which connects the caller to an interexchange carrier; and telephone exchange, which connects the caller to another local subscriber.[8] The court doubted that ISP traffic could be exchange access.[9] And, if it is not, then ISP traffic is necessarily telephone exchange service, which no one doubts is subject to reciprocal compensation.

---

3 47 C.F.R. Sec. 51.701(e).

4 Local Competition Provisions, 14 FCC Rcd 3689, 3697 (1999).

5 *Id.*, 14 FCC Rcd at 3690.

6 Bell Atlantic Tel. Cos. v. FCC, 206 F.3d 1 (D.C. Cir. 2000).

7 *Id.*, 206 F.3d at 6.

8 *Id.*, 206 F.3d at 8. *See* 47 U.S.C. Secs. 153(16), (47).

9 Bell Atlantic v. FCC, 206 F.3d at 8-9.

Factual summary. The Commission's end-to-end test fails on factual as well legal grounds, because technological developments have invalidated a key assumption on which the Commission relied. The vast majority of customer communications to an ISP in fact do *not* continue on to a distant website. Today, all but the very smallest ISPs store, or "cache," copies of their customers' favored websites on their own local servers. Storage is much less expensive than transport, and provides much faster response times. The customer's request for an Internet site goes to the cache, not the Internet. If the cache has no up-to-date copy of the site, the cache puts its own request onto the Internet from its own address, receives and stores the response, and only then delivers a copy to the customer. The customer's transaction with the ISP is thus wholly local, and the customer's call to the ISP is fully subject to reciprocal compensation.

DISCUSSION

A. Applicable Law Compels a Finding That Dial-up Calls to a Local ISP Are Local Calls Subject to Reciprocal Compensation.

The current state of federal law not only permits the Commission to treat ISP-bound calls as local and subject to reciprocal compensation, but leaves no room for any other result.

The Telecommunications Act of 1996 established the requirement for reciprocal compensation between local carriers.[10] Later the same year, the Commission interpreted Congress's intent as limiting reciprocal compensation to local calls.[11]

---

10 "Each local exchange carrier has the following duties: . . . (5) The duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications." 47 U.S.C. Sec. 251(b).

11 47 C.F.R. Sec. 51.701. For citations to the promulgating order and its subsequent history, *see* Local Competition Provisions, 14 FCC Rcd at 3693 n.18.

Through 1997 and 1998, many of the state PUCs found a call between an end user and an ISP modem to be local for reciprocal compensation purposes, even where the ultimate communication through the modem is interstate. No state found otherwise. Typically the PUCs held the transmission beyond the modem not to be a telecommunications service, but an information service using technologies independent of the public switched network. The overall communication is thus treated as two distinct calls: a local telephone call from end user to the ISP, and a separate Internet communication from the ISP to the distant website. Because the call from the end user to the ISP is no different in principle from an ordinary local voice call, the states generally held it is subject to the same provisions in carriers' interconnection agreements.

But the Commission disagreed. In 1998 it expressly rejected the "two-call" theory as to DSL service, and held the end-user-to-ISP link to be part of an interstate communication.[12] Last year the Commission extended the same treatment to dial-up ISP calls.[13] The Commission wrote,

> [T]he communications at issue here do not terminate at the ISP's local server . . . but continue to the ultimate destination or destinations, specifically at an Internet website that is often located in another state.[14]

The Commission applied an "end-to-end" analysis that judges a communication to be interstate if the two ends of the communication are in different states. Because it took the two ends of the call to be the ISP's subscriber and the distant web site, the Commission found the entire call is interstate, including the portion between the subscriber and the ISP.

---

12 GTE Telephone Operating Cos., 13 FCC Rcd 22466 (1998).

13 Local Competition Provisions, 14 FCC Rcd 3689 (1999).

14 *Id.*, 14 FCC Rcd at 3697 (footnoted omitted).

On appeal, however, the U.S. Court of Appeals for the D.C. Circuit reversed and remanded the Commission's "end-to-end" decision.[15] The court had three distinct reservations about the Commission's analysis.

First, the court was not satisfied that an end-to-end analysis properly applies to ISP calls. The court agreed that the Commission has historically been justified in relying on the end-to-end method when determining whether a particular communication is *jurisdictionally* interstate.[16] But the court distinguished the precedents on which the Commission relied to justify application of the end-to-end test here. Each of those prior cases, the court emphasized, "involved a single continuous communication, originated by an end-user, switched by a long-distance communications carrier, and eventually delivered to its destination."[17] In contrast, said the court, the present inquiry concerns ISPs, "which upon receiving a call originate further communications to deliver and retrieve information to and from distant websites."[18] The court thus questions the Commission's application of the end-to-end test to ISP traffic even for jurisdictional purposes.

Second, according to the court, the Commission has failed to explain why a jurisdictional test is relevant to whether a call is local for reciprocal compensation purposes.[19] Use of the end-to-end analysis particularly troubled the court because that test covers over the problem of whether and how the call maintains its identity in transitioning across the ISP modem from the

---

15 Bell Atlantic Tel. Cos. v. FCC, 206 F.3d 1 (D.C. Cir. 2000).

16 *Id.*, 206 F.2d at 5.

17 *Id.*, 206 F.2d at 6.

18 *Id.*, 206 F.2d at 6.

19 *Id.*, 206 F.3d at 5.

circuit-switched network to the very different modality of a packet-switched network.[20] Using language suggestive of the two-call approach favored by the states, the court noted the ISP receives a call and "originate[s] further communications" to interact with the distant website.[21] In its view, the Commission had not explained "why viewing these linked communications as continuous works for purposes of reciprocal compensation."[22]

Third, the court criticized the Commission's failure to address the statutory structure that divides the universe of local exchange service into just two categories: "The term 'local exchange carrier' means any person that is engaged in the provision of telephone exchange service or exchange access."[23] The first category, telephone exchange service, connects the user to another local user.[24] The other, exchange access, connects the user to an interexchange carrier

---

[20] *Id.*, 206 F.3d at 5.

[21] *Id.*, 206 F.3d at 6.

[22] *Id.*, 206 F.3d at 7. The Ninth Circuit also endorses a two-call analysis. "*Internet access for most users consists of two separate services.* A conventional dial-up ISP provides its subscribers access to the Internet at a 'point of presence' assigned a unique Internet address, to which the subscribers connect through telephone lines. The telephone service linking the user and the ISP is classic 'telecommunications' . . . . By contrast, the Commission considers the ISP itself as providing 'information services' under the Act. . . . ISPs are themselves users of telecommunications when they lease lines to transport data on their own networks and beyond on the Internet backbone. However, in relation to their subscribers, who are the 'public' in terms of the statutory definition of telecommunications service, they provide 'information services,' and therefore are not subject to regulation as telecommunications carriers." AT&T Corp. v. City of Portland, No. 99-35609, slip op. at 16-18 (9th Cir. filed June 22, 2000) (emphasis added).

[23] 47 U.S.C. Sec. 153(26).

[24] "The term 'telephone exchange service' means (A) service within a telephone exchange, or within a connected system of telephone exchanges within the same exchange area operated to furnish to subscribers intercommunicating service of the character ordinarily furnished by a single exchange, and which is covered by the exchange service charge, or (B) comparable service provided through a system of switches, transmission equipment, or other

so the user can place or receive a long-distance call.[25] These two categories are exhaustive, so the call from an end user to an ISP must be one or the other. The court expressed its doubts that the call could properly be considered as exchange access, because that necessarily originates or terminates telephone toll services[26] -- something an ordinary ISP does not do. Rather, the court invited the Commission to find that a LEC terminating a call to an ISP must be providing telephone exchange service.[27] That would place the ISP call squarely within the reach of interconnection agreements, and hence would subject it to reciprocal compensation, where the agreements so provide.

It will be difficult at best, and probably impossible, to sustain the Commission's end-to-end analysis beyond the D.C. Circuit decision. The test simply fails to match reality. As we show below, only an extremely small fraction of Web, UseNet, or FTP connections ever actually reach the Internet. Either the ISP responds with an up-to-date copy of the requested site, or the ISP's cache hardware launches a separate communication originating from its own IP address -- not the customer's.[28] Thus, a request that reaches the Internet is nearly always a separate

---

facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service." 47 U.S.C. Sec. 153(47).

[25] "The term 'exchange access' means the offering of access to telephone exchange services or facilities for the purpose of the origination or termination of telephone toll services." 47 U.S.C. Sec. 153(16).

[26] <u>Bell Atlantic v. FCC</u>, 206 F.3d at 9.

[27] *Id.*, 206 F.3d at 9.

[28] An IP (Internet Protocol) address is the universal identifier that labels every computer attached directly to the Internet. Its format is a "dotted quad" -- four numbers separated by periods. For example, 192.104.54.3 identifies the Commission's public website. The "domain names" commonly used for accessing Internet sites, such as fcc.gov, are mnemonic forms linked

communication originating with the ISP's cache hardware.[29] For the end-to-end test to prevail, the Commission would first have to overcome the fact that caching makes both ends of the customer's communication local. Next, the Commission would have to justify application of the test beyond its jurisdictional origins to reciprocal compensation, despite the court's having rejected all available precedents as irrelevant. Finally, the Commission must show that ISP calls are not telephone exchange service, even though the court has all but eliminated the only other possibility, exchange access.

Once ISP calls are determined to be local, they must be made subject to reciprocal compensation unless the requesting carrier voluntarily agrees otherwise. Section 251 of the Communications Act requires reciprocal compensation on local calls.[30] The sole exception applies when the requesting carrier voluntarily negotiates a different arrangement under Section 252.[31] If the carriers do not reach a voluntary accord, then a state commission arbitrating the dispute must enforce Section 251, including the reciprocal compensation provisions.[32]

---

to particular IP addresses.

[29] We discuss this process in detail below, in Part B.

[30] "Each local exchange carrier has the following duties: . . . (5) The duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications." 47 U.S.C. Sec. 251(b).

[31] "Upon receiving a request for interconnection, services, or network elements pursuant to section 251, an incumbent local exchange carrier may negotiate and enter into a binding agreement with the requesting telecommunications carrier or carriers without regard to the standards set forth in subsections (b) and (c) of section 251." 47 U.S.C. Sec. 252(a)(1).

[32] 47 U.S.C. Sec. 252(c) ("In resolving by arbitration under subsection (b) any open issues and imposing conditions upon the parties to the agreement, a State commission shall-- (1) ensure that such resolution and conditions meet the requirements of section 251, including the regulations prescribed by the Commission pursuant to section 251 . . . .")

Reciprocal compensation for local ISP calls is thus not only warranted, but mandated under the statute.

In any event, a CLEC delivering traffic to an ISP incurs real costs in doing so, and is entitled to full compensation for that service.

B. A Large Fraction of Successful Internet Communications Never Go Beyond the Local ISP.

The Commission's end-to-end test fails on factual as well as legal grounds, for the test depends on a presumed fact that technological change has made untrue. The Commission found the two ends of an Internet communication to be in different states only because it assumed the ISP's customer actually contacts the requested website.[33] But that almost never happens. Nearly all ISPs store ("cache") local copies of the websites their subscribers visit, both the popular and the obscure.[34] So far as the end user is concerned, the cache hardware in the local ISP's equipment rack masquerades as the distant website.

In the vast majority of cases, *no* requests for content continue onto the Internet. All requests stop at the cache. Then, three possibilities follow. If the requested content is in the cache, and is current, the cache responds. If the content is in the cache, but is stale, the cache hardware refreshes the content, stores it, and delivers a copy to the customer. Finally, if the

---

[33] The Commission wrote, "[T]he communications at issue here do not terminate at the ISP's local server . . . but continue to the ultimate destination or destinations, specifically at an Internet website that is often located in another state." Local Competition Provisions, 14 FCC Rcd at 3697 (footnote omitted).

[34] Today, the only exceptions are the very smallest ISPs -- those without enough customer traffic to fill their first T-1 data line. Once an ISP reaches that level of demand, it is far less expensive for the ISP to add caching than to upgrade the data line. As a result, the large majority of end users are served by ISPs that do use caching.

content is not in the cache at all, the cache hardware fetches the content from the distant website, stores it, and delivers a copy to the customer. *Requests from the cache are not continuations of the customer's request.* Cache requests originate with the cache, which transmits from its own IP address, not the customer's.[35] The distant website responds to the cache, not to the customer.[36] For customers of an ISP that uses caching -- *i.e.*, nearly all customers -- *all* end-user calls are wholly local.

Increasingly, moreover, responses come not from the requested website's host, but from system caches located at the Internet network access points (NAPs) in each state. This, even the cache-to-cache communications are intrastate. These communications travel only over the private Internet backbone. They are not calls handed off between LECs, and so do not affect inter-carrier compensation.

Caching turns on simple economics. Subscribers tend to return to the same sites, and it costs less to store the site for several weeks than to transport it across the country once.[37] Each time a subscriber downloads a new or updated site, the prudent ISP keeps a copy on hand, knowing the subscriber is likely to ask for it again. For a site popular enough to be accessed by

---

[35] There are rare exceptions. A few older commercial websites require the customer's IP address for identification. But these are quickly being upgraded to accommodate modern caching systems.

[36] *See* Peter Danzig & Karl L. Swartz, *Transparent, Scalable, Fail-Safe Web Caching*, Network Appliance, Inc., http://www.netapp.com/tech_library/3033.html#4 at Sec. 4.

[37] Paul DeVeaux, *Cache Me If You Can*, America's Network, July 1, 1999, at 34.

multiple subscribers, the economies of caching increase in proportion. In all, a well-designed cache can handle well over 60% of arriving requests from local storage.[38]

Even if bandwidth costs were not a factor, extensive caching would still be needed to avoid bottlenecks at the remote server or remote router interconnection points. Ultimately, local storage is needed because the number of Internet users is increasing much faster than the number of servers. In Internet-speak, the center cannot keep up with demand at the edges. Worse, new broadband access technologies such as DSL and cable modems increase typical download speeds by a factor of 20 or more, enabling users to click on correspondingly more sites in the time they now take to inspect one. This level of demand would paralyze the backbone without adequate caching to buffer the load. Broadband not only speeds up access to existing sites, but makes possible new Internet services, such as high-quality video and games, which will add to the demand for caching.

The caching process is transparent to the user, who does not ordinarily know or care that he has reached the cache rather than a distant site. Indeed, given the choice, a sophisticated user prefers the cache, because it makes access much faster, typically by a factor of ten. If an ISP were to unplug from the Internet backbone today, 60-80% of web queries and 100% of UseNet queries would still be answered with current information. An additional 10% of Internet traffic representing FTP would also be unaffected. Only chat and instant messaging require a "live" Internet connection. But these are both primarily text-based and require very little bandwidth, and so represent only a tiny percentage of a typical ISP's data traffic.

---

[38] Based on actual traffic measurement by CDS Networks, Inc. during June 2000.

The economic benefits of caching are improving rapidly, due to the conjunction of three trends. First, despite the much-touted "exponential growth" of the Internet, a small fraction of all available websites account for a large fraction of Internet activity. This trend increases as millions of new and less sophisticated users stay with the few sites they find in the major portal services.[39] Second, because costs of storage are declining much faster than costs of bandwidth, ISPs can operate more efficiently by caching copies of more websites. The average price per megabyte for hard-drive space halved from $0.04 in 1998 to an estimated $0.02 in 1999. Industry experts expect a drop to $0.003 by 2002.[40] Third, some content providers pay ISPs to cache material locally, to ensure fast customer response times.

Streaming audio and video are fast-growing applications that consume substantial bandwidth, but they are readily cached. In fact, high-bandwidth applications like video show the greatest cost benefit from caching. For video-intensive industries, special video caching systems

---

[39] One study, using data from December 1997, showed that 5 percent of websites in the sample studied received 75 percent of the visits. John Markoff, *Not a Great Equalizer After All?*, N.Y. Times, June 21, 1999, at C4. But the study almost certainly underestimates the concentration. Because it focused on university and adult sites, the study missed the few dozen consumer sites that draw the most traffic today. Moreover, the data used are now almost three years old -- a lifetime on the Internet. The number of people on line has multiplied several-fold during that period, with newer users more likely to restrict their activity to the same small handful of sites.

[40] *See* http://www.sciam.com/2000/0500issue/0500toig.html (from a recent issue of *Scientific American*). The equipment and services needed to accomplish caching functions are themselves a major industry, amounting to a $287 million market last year. David Strom, *The Caching Question*, Internet World, Sept. 15, 1999, at 72. The market is expected to reach *$2 billion* by 2002, with hardware caching appliances making up 80% of that market. (The rest is software packages that run on standard operating system platforms.) Source: Collaborative Marketing 1998 Internet Caching Report. A different estimate predicts a $5.1 billion market by 2003, with continuing annual growth at over 50%. Source: International Data Corp. 1999.

are available that put broadcast-quality TV on the user's desktop with no waiting.[41] Fast-changing websites such as news, weather, and sports services can use a process called "Evergreen" that caches a site's unvarying graphic content -- logos, borders, etc., which account for most of the bandwidth -- while downloading only new content, largely low-bandwidth text. The much-discussed e-commerce explosion encourages caching of web pages and forms, with only user-specific information and typed-in text actually transiting the Internet. (Authenticated or secure websites may carry coding that prohibits caching their contents.) A product called "Footprint" lets Internet content providers, in addition to ISPs, choose material to be cached at the ISPs' facilities. Some providers favor Footprint because it keeps information on the site readily available even during extremely heavy demand. UseNet newsgroups and FTP (file transfer protocol) can also be fully cached. Several companies, such as Cidera and iBeam, are delivering popular websites and other fast-changing content, including live video, to local ISP caches by high-speed satellite, completely bypassing terrestrial Internet delivery.

Other approaches to caching are emerging. Some content providers keep pre-loaded caches close by the point of request (edge of the Internet), to ease the strain on their Internet servers. A new, fast-growing industry -- Akamai and Digital Island/Sandpiper are two participants -- sells cache network services that parallel the heaviest traffic on the Internet.[42] They offer a speed advantage in part from their ability to bypass the overburdened peering points

---

41 Live audio-video content can be viewed in real time or cached for delayed viewing. Live content is transparently cached or "proxied," which replicates the information source to local destinations in real time.

42 Peter Christy and John Katsaros, *Broadband Access Shifting Business Values in the Internet: Power to the ISP*, Telecom Business, April 2000, at 26.

that tie constituent networks into the Internet.[43] These services in turn pay ISPs to cache the material locally, because it reaches the end user more quickly than via a conventional Internet connection. The services locate their own caches at the NAPs in each state, so that a customer's access is always intrastate. Moreover, almost all ISPs use large caches locally to reduce bandwidth usage, speed customer response times, and earn the additional revenues offered by the national caching services.

One variation on these services watches the user's progress through an on-line catalog, say, predicts where the user will go next, and preloads that page into a cache for near-instant response when the user clicks the mouse. Still other services cache end user personal information normally stored on the desktop hard drive, such as bookmarks, log-in data, and account information, so that any Internet terminal can emulate the user's own computer. As caching services continue to mature, and to increase ISPs' revenues, the ISP's local cache will account for an ever-growing proportion of Internet traffic.

In short, the vast majority of mouse-clicks connect the user only to a nearby cache, typically in the same exchange area. Any further communications are initiated by the cache, under its own IP address, and the responses are received by the cache. After copying the response, the cache forwards a copy to the customer in a separate communication.

Thus, communications between the end user and the ISP do not continue onto the Internet, but terminate at the ISP. These communications are unmistakably telephone exchange service, and are subject to reciprocal compensation.

---

[43] Joe McGarvey, *Backbone Bottlenecks Burst Broadband Bubble*, Inter@ctive Week Online, http://www.zdnet.com/intweek/stories/news/0,4164,2551701,00.html (April 19, 2000).

*   *   *   *

If it were necessary for accounting purposes, an ISP could easily distinguish between Internet-bound and cached traffic. The ISP's router table can be regarded as containing two categories of instructions for routing packets:

- from specified IP addresses to the same address or to other specified IP addresses; and
- between "any other" IP addresses and the specified IP addresses.

Typically the specified addresses are for the ISP itself. Thus, packets handled under the first category of instructions represent traffic destined for the ISP's own facility, including the cache engine. Only the small fraction of remaining traffic, to or from an "any other" address, will actually transit the Internet.

CONCLUSION

Even if customer requests to an ISP always continued onto the Internet, as the Commission assumed, that still would not justify application of the Commission's end-to-end test. According to the Court of Appeals, the Commission has not shown that a communication from the end user maintains its identity across the ISP modem, and has not shown how such a continuous call could fit into the statutory framework of exchange access and telephone exchange service. In fact, however, the vast majority of customer requests go no farther than the ISP's cache hardware, and are wholly local by any test. And, in any event, a CLEC delivering traffic to an ISP incurs real costs in doing so, and is entitled to full compensation for that service.

Both the facts and the law dictate that reciprocal compensation be applied to ISP-bound traffic just as it is to local voice calls.

Respectfully submitted,

John Cleven Tooker /m

John Cleven Tooker, President
Western Telephone Integrated
Communications, Inc., *pro se*
303 East Jackson Street
Medford OR 97501

July 21, 2000

SERVICE LIST

Honorable William E. Kennard
Office of the Chairman
Federal Communications Commission
Room 8-B201, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Honorable Harold Furchtgott-Roth
Commissioner
Federal Communications Commission
Room 8-A302, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Honorable Susan Ness
Commissioner
Federal Communications Commission
Room 8-B115, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Honorable Michael K. Powell
Commissioner
Federal Communications Commission
Room 8-A204, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Honorable Gloria Tristani
Commissioner
Federal Communications Commission
Room 8-C302, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Ms. Dorothy Atwood
Common Carrier Bureau
Federal Communications Commission
Room 5-C345, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Mr. Lawrence Strickling
Common Carrier Bureau
Federal Communications Commission
Room 5-C450, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Mr. Rodney McDonald
Common Carrier Bureau
Federal Communications Commission
Room 5-A266, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Ms. Tamara Preiss
Common Carrier Bureau
Federal Communications Commission
Room 5-A232, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554

Mr. Adam Candeub
Common Carrier Bureau
Federal Communications Commission
Room 5-A104, The Portals II
445 12th Street, S.W.
Washington, D.C. 20554